

Intel® PRO/Wireless 2011 LAN Solution

Networks as mobile as the people who use them

KEY FEATURES

- **Extend LAN connectivity without costly wiring**
- **Deploy instant networks at any location**

Now you can be connected without being tied down – with Intel® PRO/Wireless 2011 LAN Adapters and Access Points. Fast and compatible with existing Ethernet technology, wireless LANs extend the reach and the usefulness of your wired network resources. From conference rooms, training centers and cafeterias, you are free to work, teach or study wherever you're most productive. There's no easier way to provide reliable, real-time LAN access away from the desk.



Extend your network ... or create a new one

No network? No problem – the Intel® PRO/Wireless 2011 LAN Solution can serve as the basis for an entirely new network infrastructure, in which devices are instantly deployed or reconfigured without the costs and concerns of pulling wires throughout a building. Intel® PRO/Wireless 2011 LAN PC Cards also let you create ad hoc networks on-the-fly, sharing information in secure peer-to-peer sessions, allowing communication with only the people you authorize.

Intel is the worldwide leader in Fast Ethernet networking connections¹, and also co-inventor of the Ethernet, Fast Ethernet and Gigabit Ethernet standards, so it shouldn't be surprising that Intel is now providing the best Wireless Ethernet solutions. Intel has designed these new wireless LAN products to IEEE 802.11b High Rate specifications, protecting your investment in infrastructure and assuring you of cross-vendor interoperability.

Supporting Features

Fast 11Mbps connectivity based on IEEE 802.11b High Rate standard (aka Wireless Ethernet)

Reliable and trusted net access – even when you're not at your desk

Brand name reliability

Simple to set up and manage

Benefits

- Interoperates with other 802.11b Wi-Fi[®]-approved products
- Backwards compatible with 802.11 Direct Sequence products at 1 and 2Mbps
- Dynamic rate scaling tunes performance to minimize interference
- Automatic load balancing and preemptive roaming optimize each client's connection to the LAN
- Seamless bridging between separate Ethernet networks allows connectivity without cables

- 128-bit Wired Equivalent Privacy (WEP) protects information in transit by adding powerful encryption without a noticeable impact to performance
- Bi-directional authentication restricts LAN access to recognized clients and Access Points via advanced security settings
- The quality, reliability and support that you would expect from the world leader in Fast Ethernet networking connections¹

- Plug 'n' Play adapter installation
- Browser-based configuration and management with full support for SNMP v3
- Integrates into existing Ethernet networks



Intel® PRO/Wireless 2011 LAN Access Point

KEY FEATURES

- **Enables mobile roaming and building-wide coverage**
- **Bridges wired and wireless networks**
- **Eases installation and management**

The fastest & easiest way to enable network connectivity wherever you need it

Whether you need to extend the reach of a wired network or quickly deploy an all wireless LAN, Intel® PRO/Wireless 2011 LAN Access Points provide a reliable, easy-to-install network infrastructure. Intel's standards-based solution is ideal for historic buildings, leased office spaces, temporary projects ... any location where wired connectivity is not practical or cost-effective.

Network-to-network bridging – Bridges between wired and wireless networks and can also connect two wired networks wirelessly.

Secure access control with bi-directional authentication – Use MAC addresses and pre-defined network IDs to restrict which adapters and Access Points can connect to the network.

Embedded web server – Configure, monitor and manage Access Points from anywhere in the world via standard web browser.



Support for data and VoIP applications, wireless handsets – Enables converged H.323 voice and data networks that are truly mobile.

Multi-purpose design – Mounts easily on walls and ceilings, rests discreetly on shelves and filing cabinets.

BNC-mounted 1dB gain diversity antennas – Provide reliable coverage for most indoor environments. Built-in BNC connectors also support a wide variety of optional specialty antennas.

Features

Private, trusted connections

- 128-bit Wired Equivalent Privacy (WEP)
- Bi-directional authentication

Standards-based design

- Compliant with IEEE 802.11b High Rate specification

Reliable performance

- Seamless bridging to, from and between Ethernet networks
- Wireless repeating

Simple to set up and manage

- Advanced manageability
- Embedded web server with full support for SNMP v3
- Receives power through the Ethernet cable²
- Comprehensive site survey tool (included in every box)

Benefits

- Encrypts transmissions to help ensure privacy while maintaining speed and quality
- Restricts LAN access to recognized clients and Access Points via advanced security settings

- Ensures interoperability with all other 802.11b High Rate compliant products

- Innovative, cost-effective solution extends the reach of wired networks to conference rooms, classrooms, training centers, etc.
- Extends network coverage to areas that don't have network access

- Allows firmware updates via FTP or a direct serial connection without taking the Access Point offline
- Upgrade entire wireless network at one time from one remote location
- Enables configuration and management with a browser from anywhere in the world, so changes take just a few mouse clicks, not a personal visit
- Simplifies set-up and eliminates costly process of running electricity to each Access Point
- Makes it easy to optimize Access Point placement for best coverage and performance

Intel® PRO/Wireless 2011 LAN PC Card

Fast, reliable network connectivity – even when you’re not at your desk

Unleash the productivity of your workforce with Intel® PRO/Wireless 2011 LAN PC Cards. With untethered instant-networking capabilities, users of laptops and other mobile devices can work where they’re most productive.

Take your network with you

Immediate access to critical information while you’re still in a conference room ... real-time updates to your supply-chain system from the factory floor ... ad hoc, peer-to-peer networking sessions wherever you happen to be ... classroom computers and peripherals that communicate with each other and the Internet instantly and easily – the possibilities of wireless connectivity come to life with Intel PRO/Wireless 2011 LAN PC Cards.

*Location profiles –
Allows hassle-free traveling among networks.*

*Mobile IP –
Enables roaming across sub-nets without rebooting.*

*DHCP –
Supports the same dynamic IP address servers as wired networks.*



*Integrated diversity antennas –
Two integrated antennas overcome multi-path problems for the best possible connection.*

*Automatic load balancing and preemptive roaming –
Continuously monitors signal strength, signal quality and Access Point traffic and makes adjustments to optimize performance.*

KEY FEATURES

- **Advanced hardware design provides secure, high-speed connectivity while roaming**
- **Ad hoc mode enables simple peer-to-peer networks**
- **Intelligent on-board power management extends laptop battery life**

Features

Uninterrupted connectivity

- Advanced roaming scheme
- Mobile IP
- Location profiles
- International roaming

Easy to use and manage

- Task Tray indicators
- PRO/Wireless client utilities
- DHCP support
- Robust management system

Automatic performance optimizations

- Load balancing
- Dynamic rate scaling
- Advanced power management
- Ad hoc mode

Benefits

- Operates continuously and automatically in the background, so that connection with a new Access Point is established before the old connection is lost
- Seamless roaming across sub-nets without rebooting
- Enables travel between offices or between home and work without reconfiguring laptops to log onto a network
- Automatically selects the correct spectrum range when used in multiple countries
- Automatic updates keep users informed of signal strength and quality
- Optimize power and performance levels, graph interference patterns, view transmission statistics
- Lets clients obtain a leased IP address from a DHCP server, eliminating the complexity of assigning fixed IP addresses in a large enterprise
- Configure and monitor from anywhere in the world via web browser
- Automatically switches among Access Points to optimize signal strength and quality, and minimize spectrum sharing
- Always seeks to connect at 11Mbps, then switches (if network traffic demands) to 5.5, 2 or 1Mbps for increased signal range; automatically returns to higher speed when conditions allow
- Extends laptop battery life to maximize time away from the desk
- Allows direct peer-to-peer communication without using an Access Point – perfect for small networks or temporary project teams

SPECIFICATIONS		Intel® PRO/Wireless LAN Product Suite
DYNAMIC RATE SHIFTING (Auto-selects highest usable rate)	1, 2, 5.5, 11Mbps	
NETWORK STANDARD(S)	IEEE 802.11b High Rate, 802.3, 802.1H, 802.1d Spanning Tree	
FREQUENCY	2.4GHz ISM band	
WIRELESS MEDIUM	Direct Sequence Spread Spectrum (DSSS)	
MEDIA ACCESS CONTROL	Carrier Sense Multiple Access with Collision Avoidance (CSMA/CA)	
OPERATING SYSTEMS SUPPORTED	Windows* 2000, 98, 95, NT*, and Pocket PC; Linux*; Palm OS*	
ENCRYPTION	No encryption option; 64-bit WEP encryption option; 128-bit WEP encryption option	
MODULATION	DBPSK @ 1Mbps; DQPSK @ 2Mbps; CCK @ 5.5 and 11Mbps	
OPERATING CHANNELS	11 channels (U.S. and Canada); 13 channels (ETSI compliant countries); 14 channels (Japan)	
ROAMING	IEEE 802.11b High Rate compliant with Intel enhanced roaming features; Mobile IP with MD5 encryption for member authentication	
CERTIFICATION	U.S./Canada: FCC Part 15 Class B US Unintentional Emissions; FCC Part 15.247, 15.205, 15.209 US Spread Spectrum; DOC RSS-210 Canadian Spread Spectrum; Europe: ETS 300 328, ETS 300 826, CE Marked; Japan: RCR STD-33; Contact us for other information outside the U.S.	
ENVIRONMENTAL OPERATING RANGES	Operating Temperature: -20° to 70°C; Storage Temperature: -30° to 80°C; Operating Altitude: up to 2.4km; Humidity: 95% maximum non-condensing Shock: 40G, 11mS, half sine; Vibration: 2G peak, sine; 0.02G peak random	
WARRANTY	Three year: Access Points; Lifetime limited: Client Adapters	

SPECIFICATIONS		Intel® PRO/Wireless LAN PC Card
NOTEBOOK SLOT TYPE	Type II 16-bit PC card	
SOFTWARE DRIVERS	Windows* 2000, 98, 95, NT*, Pocket PC and DOS; Linux*; Palm OS*	
DEVICE DRIVERS	NDIS2, NDIS3, NDIS4, NDIS5 and ODI	
SOFTWARE UTILITIES	Location profiles "My WLAN places"; Real-time signal strength/quality "NIC Utilities"; Diagnostic and Configuration "NIC Info"; Firmware upgrade "NIC Update"; Site Survey Tool	
NETWORK ARCHITECTURE TYPES	Supports peer-to-peer networking and communication to wired networks via Access Points	
RANGE AT 1MBPS (TYPICAL)	1500ft (460m) open environment; 300ft (90m) office environment	
RANGE AT 11MBPS (TYPICAL)	400ft (120m) open environment; 100ft (30m) office environment	
ANTENNA	Integrated internal diversity antenna	
LED INDICATORS	Link status and link activity	
RECEIVE SENSITIVITY	-87dBm @ 1Mbps; -85dBm @ 2Mbps; -84dBm @ 5.5Mbps -81dBm @ 11Mbps	
MAX OUTPUT POWER	Typical 18dBm; Minimum 14dBm	
POWER CONSUMPTION	Transmit: 300mA typical (500mA max.); Receive: 170mA typical (300mA max.); Sleep: 10mA typical (25mA max.)	
SAFETY COMPLIANCE	USA/Canada: UL1950/CSA 22.2; Europe: CE Marked	
DIMENSIONS	Length: 111mm/4.37in; Width: 54mm/2.23in; Thickness: 5mm/.20in; Weight: 1.6oz/45.36g	

FOR PRODUCT INFORMATION

World Wide Web	www.intel.com/network
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Australia	+61-2-9937-5800

ON-LINE DOCUMENTS

To learn more about Intel® PRO/Wireless 2011 LAN Solutions, or to connect with an Intel® Premier Provider in your area, visit us at www.intel.com/network

CUSTOMER SUPPORT

Intel Customer Support Services offers a broad selection of programs. For more information, contact us on the World Wide Web at support.intel.com/sites/support. Service and availability may vary by country.

¹ Dell® Oro Group, 1999

² Requires optional accessory

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SPECIFICATIONS		Intel® PRO/Wireless LAN Access Point
STANDARDS CONFORMANCE	IEEE 802.11b High Rate, IEEE 802.3 (10BASE-T), 802.1H, 802.1d Spanning Tree, SNMP v2	
LOCAL CONFIGURATION	Direct console port (serial EIA-232 DB-9 male)	
REMOTE CONFIGURATION	HTTP, Telnet, SNMP, PPP, TFTP, and Intel feature to perform bulk configuration to many APs	
AUTOMATIC CONFIGURATION	BOOTP and DHCP	
MAXIMUM CLIENTS	256	
MANAGEMENT FEATURES	Client Access Control via MAC address; Embedded HTTP Server SNMP traps; Multilevel passwords	
DIAGNOSTIC CAPABILITIES	Event logging, data packet tracing, SNMP alarm generation, operating statistics; Protocol and bandwidth filters; Site Survey utility with signal strength logging	
ROAMING SUPPORT	IEEE 802.11b High Rate compliant with Intel enhanced roaming features; Mobile IP	
PERFORMANCE ENHANCEMENTS	Proxy ARP; Short preamble support; QoS Voice and Data Prioritization	
SECURITY	64- or 128-bit Encryption; Access Control List; MD5 Member Authentication (Mobile IP)	
RANGE AT 1MBPS (TYPICAL)	1500ft (460m) open environment; 300ft (90m) office environment	
RANGE AT 11MBPS (TYPICAL)	400ft (120m) open environment; 100ft (30m) office environment	
ANTENNA	Two 2.2dBi dipole antennas with diversity support; also supports specialty antennas	
LED INDICATORS	Status, network activity, and RF activity	
RECEIVE SENSITIVITY	-87dBm @ 1Mbps; -85dBm @ 2Mbps; -84dBm @ 5.5Mbps; -81dBm @ 11Mbps	
MAX OUTPUT POWER	Typical 18dBm; Minimum 14dBm	
POWER SUPPLY	Input: 85 to 270V AC; Output: 12V DC	
POWER ENHANCEMENTS	Power over Ethernet option ² (eliminates need for AC power at AP location)	
SAFETY COMPLIANCE	USA/Canada: UL1950/CSA 22.2; Europe: CE Marked	
DIMENSIONS	Length: 15.24cm/6in; Width: 21.59mm/8.5in; Height: 4.45cm/1.75in; Weight (w/ power supply): 1lbs./0.454kg	
HARDWARE SHIPPING CONFIGURATION	Access Point, two dipole antennas, one power supply, one country-specific power supply cord (three in "EU" SKU), mounting brackets, clips and screws	

ORDER CODES

Wireless PC Card, 2.4GHz, 11Mbps	
North America	WPC2011NA
Europe R&TTE countries, Australia	WPC2011EU
France	WPC2011FR
Japan	WPC2011JP
Wireless Enterprise Access Point, 2.4GHz, 11Mbps	
North America	WEAP2011NA
Europe R&TTE countries, Australia	WEAP2011EU
France	WEAP2011FR
Japan	WEAP2011JP

